



RANDOM HOUSE WEBSTER'S
COMPUTER
& INTERNET
DICTIONARY
Third Edition

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PREFACE

Back in 1995, when I prepared the second edition of this book, then called the *Random House Personal Computer Dictionary*, the World Wide Web was just beginning to create a small buzz in the computing world. But few realized then that the Web represented a paradigm shift in the way computers are used. Prior to the Web, personal computers were mainly machines for creating documents, analyzing data, and playing games. Today, PCs are portals into rich virtual environments—environments that offer a wealth of information as well as communities. Not surprisingly, *computerese* is evolving to describe things and situations that never even existed a couple of years ago. Words like *Web*, *Net*, *surf*, *chat*, *e-mail*, and *URL* have become commonplace. This new edition—retitled to reflect its changes—includes nearly 1,000 new terms, mostly in the Internet category. Just as the Web is profoundly changing *computerese*, it's also changing the way *computerese* is documented. In 1996, I created an on-line version of the dictionary called the *PC Webopædia* (www.pcwebopedia.com). The Web site has undergone many changes and now serves as both an on-line glossary and a search engine for technology information. And just as the first two editions of the book contained the core information for the Web site, the expanded site now forms the basis for this new book.

While the electronic version of the dictionary has some obvious advantages—more frequent updates, full-text search engine, and hot-linked cross-references—printed books continue to be the preferred medium of choice for most people most of the time. This preference is probably due to the still rather primitive and clumsy computer interfaces, but may also be tied to a deeper human need for tactile feedback. It will be interesting to see whether the new generation of children who are growing up with the Internet will still choose printed matter over its electronic equivalents.

Once again, I owe thanks to my intrepid editor, Enid Pearsons, who has now masterfully guided the dictionary through three editions. And special thanks go to Charles Kozierok for reviewing the manuscript and pointing out many errors. I highly recommend his Web site, the *PC Guide* (www.pcguide.com) for more detailed information about computers. Of course, I accept full responsibility for any errors or omissions that remain. Lastly, thanks to the thousands of visitors to the *PC Webopædia* who e-mailed encouragement and questions and who asked repeatedly for access to this information in book form. It was the first time in my 20 years of being an author and technical writer that I received so much direct response from readers. This is one advantage of electronic publishing that I had not expected, and one that I find nearly irresistible—immediate feedback from readers :-).

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⇒ See also BATTERY PACK; NiCAD BATTERY PACK; NiMH BATTERY PACK.

little-endian See under BIG-ENDIAN.

load 1. To install. For example, to load a disk means to mount it in a disk drive. **2.** To copy a program from a storage device into memory. Every program must be loaded into memory before it can be executed. Usually the loading process is performed invisibly by a part of the operating system called the *loader*. You simply enter the name of the program you want to run, and the operating system loads it and executes it for you. **3.** In programming, *load* means to copy data from main memory into a data register. —*n.* **4.** In networking, *load* refers to the amount of data (traffic) being carried by the network.

⇒ See also LOADER; MAIN MEMORY; OPERATING SYSTEM; PROGRAM; REGISTER; TRAFFIC.

load balancing Distributing processing and communications activity evenly across a computer network so that no single device is overwhelmed. Load balancing is especially important for networks where it's difficult to predict the number of requests that will be issued to a server. Busy Web sites typically employ two or more Web servers in a load-balancing scheme. If one server starts to get swamped, requests are forwarded to another server with more capacity. *Load balancing* can also refer to the communications channels themselves.

⇒ See also CLUSTERING; SERVER; THREE-TIER; TP MONITOR.

loader An operating system utility that copies programs from a storage device to main memory, where they can be executed. In addition to copying a program into main memory, the loader can also replace virtual addresses with physical addresses.

Most loaders are invisible: that is, you cannot directly execute them, but the operating system uses them when necessary.

⇒ See also LOAD; MAIN MEMORY; PROGRAM; UTILITY; VIRTUAL MEMORY.

local In networks, *local* refers to files, devices, and other resources at your workstation. Resources located at other *nodes* on the networks are *remote*.

⇒ See also LOCAL-AREA NETWORK; NETWORK; NODE; REMOTE; REMOTE CONTROL SOFTWARE; WORKSTATION.

local-area network A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves. A system of LANs connected in this way is called a *wide-area network* (WAN).

Most LANs connect workstations and personal computers. Each *node*

(individual computer) in a LAN has its own CPU with which it executes programs, but it is also able to access data and devices anywhere on the LAN. This means that many users can share expensive devices, such as laser printers, as well as data. Users can also use the LAN to communicate with one another, by sending e-mail or engaging in chat sessions.

There are many different types of LANs, *Ethernets* being the most common for PCs. Most Apple Macintosh networks are based on Apple's AppleTalk network system, which is built into Macintosh computers.

The following characteristics differentiate one LAN from another:

topology: The geometric arrangement of devices on the network. For example, devices can be arranged in a ring or in a straight line.

protocols: The rules and encoding specifications for sending data. The protocols also determine whether the network uses a peer-to-peer or client/server architecture.

media: Devices can be connected by twisted-pair wire, coaxial cables, or fiber optic cables. Some networks do without connecting media altogether, communicating instead via radio waves.

LANs are capable of transmitting data at very fast rates, much faster than data can be transmitted over a telephone line; but the distances are limited, and there is also a limit on the number of computers that can be attached to a single LAN.

⇒ See also APPLETalk; ARCNET; BRIDGE; CLIENT/SERVER ARCHITECTURE; DCC; E-MAIL; ETHERNET; IEEE 802 STANDARDS; INTERNETWORKING; MAN; NETWORK; NETWORK INTERFAC CARD; NETWORK OPERATING SYSTEM; NODE; NOVELL; PEER-TO-PEER ARCHITECTURE; PERSONAL COMPUTER; PROTOCOL; SNMP; SWITCHING HUB; TOKEN BUS NETWORK; TOKEN-RING NETWORK; TOPOLOGY; TOPS; VLAN; WIDE-AREA NETWORK.

local-area wireless network (LAWN) A type of local-area network that uses high-frequency radio waves rather than wires to communicate between nodes.

⇒ See also LOCAL-AREA NETWORK.

local bus A data bus that connects directly, or almost directly, to the microprocessor. Although local buses can support only a few devices, they provide very fast throughput. Modern PCs include both a PCI local bus and a more general ISA expansion bus for devices that do not require such fast data throughput.

⇒ See also BUS; EXPANSION BUS; PCI; VL-Bus.

local echo Same as HALF DUPLEX.

LocalTalk The cabling scheme supported by the AppleTalk network protocol for Macintosh computers. Most local-area networks that use AppleTalk, such as *TOPS*, also conform to the LocalTalk cable system. Such networks are sometimes called *LocalTalk networks*.